REMARKS

By the present amendment, claims 1 and 16 have been amended to incorporate the subject matter of claim 3. Accordingly, claims 2 and 4 have been amended to recite "the heating treatment," and claims 3, 19, 21, and 24 have been canceled.

Further, claims 27-32 have been canceled, and new claims 33-36 corresponding to claims 2, 4-6 and 20 but dependent directly or indirectly on claim 16 have been added.

Claims 1-2, 4-6, 10, 11-17, 20, 22-23, 25-26 and 33-36 are pending in the present application. Independent claim 1, and claims 2-6, 10, 11-15, 17, 20, 22-23, and 25-26 dependent directly or indirectly thereon, are directed to a manufacturing method of a polarizing film. Independent claim 16, and claims 33-36 dependent directly or indirectly thereon, are also directed to a manufacturing method of a polarizing film.

In the Office Action, claims 5, 10, and 20-22 are objected to on the ground that N/cm should be N/cm^2.

Reconsideration and withdrawal of the objection is respectfully requested. The unit N/cm measures linear loads pressure (not plane pressure), as described and illustrated in the specification, for example with the lamination performed by passing through pinch rolls to be pressed together with heat. Accordingly, it is submitted that the unit N/cm is correct.

In view of the above, it is submitted that the objection should be withdrawn.

Next, in the Office Action, claims 27-32 are objected to as failing to recite any additional limitation. The Examiner alleges that a dyed hydrophilic polymer film is necessarily non-foamed.

In the Office Action, claims 27-32 are also rejected under 35 U.S.C. 112, first paragraph, for lack of a written description of "non-foamed" material in the specification.

Claims 27-32 have been cancelled by the present amendment. Accordingly, the objection and rejection are moot.

Next, in the Office Action, the following rejections are made:

- Claim 16 is rejected under 35 U.S.C. 103(a) as obvious over US 4,387,133 to Ichikawa et al. (Ichikawa) in view of US 4,370,374 to Raabe et al. (Raabe);
- Claims 1, 2-6, 10, 12-15, and 19-32 are rejected under 35 U.S.C. 103(a) as obvious over Ichikawa in view of Raabe, and further in view of either US 2,237,567 to Land (Land) or US 3,051,054 to Crandon (Crandon), and optionally US 3,772,128 to Kahn et al. (Kahn);
- Claim 17 is rejected under 35 U.S.C. 103(a) as obvious over Ichikawa in view of Raabe and further in view of US 4,230,768 to Hamada et al. (Hamada).

It is alleged in the Office Action that a person of the art would apply Raabe to a stretched polymer film used as optical film because "foamed films are well known as polarizing films" (Office Action at page 8).

Reconsideration and withdrawal of the rejections is respectfully requested. Applicants urge that a person of the art would be taught away from applying Raabe to the optical field because (i) the teachings of Raabe are limited to foamed films outside of the optical field, and (ii) the method of Raabe is not usable in the optical field.

First, Raabe is directed at providing a skin onto foamed materials and Raabe is completely silent as to any optical materials. Specifically, Raabe states generally that:

> The present invention is based on the problem of providing a plastics film, with which <u>foamed plastics bodies</u> can be encapsulated without the application of adhesives such as contact or solution adhesives. (Raabe at col. 1, lines 44-47) (emphasis added)

Further, the motivation from Raabe to form "an excellent durable bond without blisters" is limited

to the foamed materials field. The full sentence of Raabe in the relevant passage reads:

> In addition, they [the protective films] must be firmly joined to the surface of the foamed plastics bodies, not form blisters and retain a durable bond. (Raabe at col. 1, lines 26-28) (emphasis added)

This discussion of blisters in Raabe clearly applies to "foamed plastics bodies" only.

Still further, the other examples mentioned in Raabe, namely, "textile fleeces or textile fabrics, cellulose tracks, objects including films and panels made of other plastics materials, especially polyvinyl chloride," (Raabe at col. 4, lines 58-61) fail to point toward a use in the optical field. As a result, a person of the art would not have found a motivation to apply the protective film of Raabe to a non-foamed optical film.

In summary, Raabe does not provide any suggestion or motivation to apply its technique to non-foamed optical films, such as a polarizer (A) comprising a stretched polymer film made of dyed hydrophilic polymer film, as recited in present claim 1, or a polarizer (A) comprising a dyed hydrophilic polymer film, as recited in present claim 16.

Second, the method of Raabe would not have been expected to apply to any film in the optical field (foamed or non-foamed), because of the expected degradation in optical properties due to the steps of the method taught in Raabe.

Specifically, Raabe teaches in Example 5 that a multiplayer film is thermocompression-bonded to a foamed film for 10 seconds with an iron. A person of the art would have recognized immediately that, if the bonding method of Raabe were used on an optical film, in particular a polarizing film, this would result in an important deterioration of the optical properties of the optical laminate.

In support of the above explanation, a Declaration under 37 C.F.R. 1.132 by Mr. Kazuki

Tsuchimoto, who is the first-named inventor in the present application, is submitted with this paper. In the Declaration, Mr. Tsuchimoto reports a basic comparative experiment conducted by laminating a protection film having a single structure of polypropylene layer (thickness 60 μm, softening point 135°C), to a polarizer by thermocompression bonding using a hot plate with different heating periods. As noted in the Declaration, the single-structure protection film is used for simplification purposes in the comparative experiment, as the damage to the optical properties of a polarizing film upon heating is influenced by the thickness and the material rather than by the layer structure.

It is immediately apparent from the experimental results reported on Table 1 on page 3 of the Declaration that a heating time of 10 seconds resulted in a serious deterioration of the optical properties, namely, the polarization degree. In particular, with a heating time of 10 seconds, the polarization degree was about 99.2% or less, i.e., seriously substandard, whereas a heating time of 5 seconds resulted in a polarization degree above 99.8% corresponding to the standard requirement.

In summary, the comparative experiments reported in the Declaration confirm that a person of ordinary skill in the art would not have been motivated to attempt to transfer the thermocompression bonding of Raabe in the optical field, and in particular in the polarizer field, because that person would have recognized that the method of Raabe was very likely to lead to a failure of the optical element. As a result, in the absence of a reasonable expectation of success, a person of ordinary skill in the art would have had no motivation to refer to the teaching of Raabe or to attempt to adapt it to a non-foamed film such as a polarizer comprising a stretched polymer film made of dyed hydrophilic polymer film or a polarizer comprising a dyed hydrophilic polymer film.

In contrast, the present inventors have found that a polarizing film can be advantageously manufactured by a method comprising steps of contacting a protective film (B) comprising at least two layers having different softening points onto at least one face of such a polarizer (A), without using an adhesive, and thermocompression bonding, wherein a heating treatment is performed for a period of time of not more than five seconds, as recited in respective claims 1 and 16. This feature of the present invention and its advantages are not taught or suggested in Raabe, and the other cited references fail to remedy this deficiency of Raabe. Therefore, the present claims are not obvious over the cited references taken alone or in any combination.

In addition, with respect to claims 5, 10, 20, 22, and 35, it is submitted that Raabe only teaches iron heating, i.e., plane pressure bonding, so that Raabe fails to teach or suggest pressurization performed by applying a linear loads pressure at not less than 5 N/cm, as recited in present claims 5, 10, 20, 22, and 35. Further, the other cited references fail to remedy these deficiencies of Raabe. Therefore, for these respective reasons alone, present claims 5, 10, 20, 22, and 35 are not obvious over the cited combinations of references.

Further, with respect to the other dependent claims, Raabe and the other cited references fail to teach or suggest the combinations of features recited in these respective claims. Therefore, for these respective reasons alone, these dependent claims are not obvious over the cited references taken alone or in any combination.

In view of the above, it is submitted that the rejections should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 50-2866.

Respectfully submitted,

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